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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/153,781	09/16/1998	LOUIS B. ROSENBERG	IMM1P053	6020

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PATENT DEPARTMENT (51851)
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EXAMINER	
LIANG, REGINA	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/153,781	ROSENBERG ET AL.	
	Examiner	Art Unit	
	Regina Liang	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-15,17-23,25,27-29,33,34,36-40,42,43,58-70,72-76,78-82,92-96 and 98-119* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/20/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 12-15,17-23,25,27-29,33,34,36-40,42,43,58-70,72-76,78-82,92-96 and 98-119.

DETAILED ACTION

1. This Office Action is response to amendment filed 2/12/07. Claims 12-15, 17-23, 25, 27-29, 33, 34, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-119 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 116 recites the limitation "said server computer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. Claims 12, 13, 17-21, 36-40, 75, 102-104, 106, 109-113, 117, 118 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierce et al. (5,299,810).

With regard to claim 12, Pierce et al. teaches a system (figures 1, 2) comprising: a network means (items 77 and 78); a first computer coupled to said network means (item 74), said first computer comprising a first visual display (item 42) and a first human/computer interface device capable of providing a first computer input ("first interface device" including items 62, 66, 90 and 12), said first interface device comprising an actuator capable of providing tactile sensations in response to a haptic feedback signal provided by said first computer (item 26 and column 1, lines 50-55), said first computer developing a first image in a first gaming

environment on said visual display that is associated with first stored tactile sensation information (figure 1, item 114), wherein said first computer produces said first image and said haptic feedback signal based at least in part on information received from a second computer (figure 2, item 76) and based at least in part on said first computer input (column 1, lines 57-69 and column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60), and said second computer coupled to said network and comprising a second visual display (figure 2, item 44) configured to produce a graphical environment, and a second interface device capable of providing a second computer input (figure 2, "second human/computer interface device" including items 68, 72, 92 and 14), said second interface device comprising an actuator capable of providing haptic feedback in response to a haptic feedback signal provided by said second computer (figure 2, item 28), said second computer developing a second image in a second gaming environment on said second visual display substantially simultaneously with said development of said first image in said first gaming environment (figure 1, item 110), said second image associated with second stored tactile sensation information (figure 2, item 28), wherein said second computer produces said second image and said haptic feedback signal based on information received from said first computer and based on said second computer input (column 1, lines 57-69 and column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60).

With regard to claim 13, Pierce et al. teaches a system as recited in claim 12 wherein said second computer means input comprises at least one of a position input for said human/computer interface device, and a button click input (figure 2, item 90).

With regard to method claim 17, Pierce et al. was shown above in regard to the rejection of apparatus claim 12 to have an apparatus that makes the method of claim 17 anticipated. In

addition Pierce et al. teaches "wherein said first computer information comprises information representing a position of a manipulandum, generating a graphic environment" (figure 1, items 50 and 60) ; And further the communication links between the items 76, 77 correspond to "a network interface of a second computer" as claimed.

With regard to claim 18, Pierce et al. teaches a method as recited in claim 17 wherein said first computer information includes haptic feedback information indicating a tactile sensation to be output by said second haptic feedback device (figure 1, item 58 and figure 2 item 26).

With regard to claim 19, Pierce et al. teaches a method as recited in claim 17 further comprising sending second computer information from said second computer to said first computer over said network (figure 2, items 77 and 78).

With regard to claim 20, Pierce et al. teaches a method as recited in claim 19 wherein said second computer information includes said input information from said second haptic feedback device and haptic feedback information indicating a tactile sensation to be output by said first haptic feedback device (figure 1, item 58 and figure 2 item 26).

With regard to claim 21, Pierce et al. teaches a method as recited in claim 17 wherein said image includes displaying a first graphical object controlled by a user of said first haptic feedback device, and displaying a second graphical object controlled by a user of said second haptic feedback device (figure 1).

With regard to method claim 38, Pierce et al. was shown above in regard to the rejection of apparatus claim 12 and method claim 17 to have an apparatus and method that makes the method of claim 38 anticipated. In addition Pierce et al. teaches wherein said second computer

information comprises position information describing a position of a manipulandum of a second haptic feedback device (figure 1, items 68 and 60). And further the communication links between the items 74 and 77 correspond to "a first network interface of said first computer" and the communication links between the items 76 and 77 correspond to "a second network interface of said second computer" as claimed.

With regard to claims 36, 37, 39, and 40, Pierce et al. was shown above read on all limitation of these claims.

With regard to method claim 75, Pierce et al. was shown above in regard to the rejection of apparatus claim 12 and method claims 17 and 38 to have an apparatus and method that makes the method of claim 75 anticipated. In addition Pierce et al. teaches "said information comprising haptic feedback information and position information for a graphical object displayed by said second computer" (figure 1 illustrates graphical objects on two displays and items 110 and 114 correlate to haptic feedback).

With regard to method claim 102, Pierce et al. was shown above in regard to the rejection of apparatus claim 12 and method claims 17 and 38 to have an apparatus and method that makes claim 102 anticipated. In addition, Pierce et al. teaches "a first memory coupled to said first processor" and "a second memory coupled to said second processor" (col. 5, lines 64-66, col. 6, lines 14-16).

With regard to method claim 103, Pierce et al. was shown above in regard to the rejection of apparatus claim 12 and method claims 17 and 38 to have an apparatus and method that makes claim 103 anticipated.

With regard to claims 104, 106, Pierce et al. teaches "said first force feedback device is coupled to a manipulandum configured to move in two degrees of freedom" (figure 2, item 62 "Steering Handle" act as joystick for control of graphical "vehicle").

With regard to claim 109, Pierce et al. teaches the first image includes a graphical object that can interact with a projectile (e.g., col. 11, lines 3-17).

With regard to claims 110, 111, Pierce et al. was shown above read on all limitation as claimed (e.g., col. 11, lines 3-66).

With regard to claim 112, Pierce et al. was shown above in regard to the rejection of claims 12 , 17, 38, 102, 104 to make the claim 112 anticipated. In addition Pierce teaches "at least one sensor... to detect a position of said manipulandum" (It is clear that a steering wheel such as item 62 must have a sensor detecting its position in order for it to work and control the graphical object).

With regard to claim 113, Pierce et al. teaches a visual display (42) coupled to the first processor.

With regard to claim 117, see e.g. Pierce col. 8lines 36-67 which discloses providing haptic feedback when the vehicle is hit and the command are processed (parsed) by the second processor to actuate the haptic feedback.

With regard to claim 118, see e.g. Pierce col. 8 lines 16-35 which discloses determining if a shot was fired, and inherently a button input is present in order to determine this shot.

6. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamakita et al ("Tele-Virtual reality of dynamic mechanical Model", Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots And Systems, Raleigh, NC July 7-10, 1992).

With regard to claim 27, Yamakita et al. teaches a method for providing physical interaction over a computer network (abstract and figure 1) comprising: enabling a first information comprising an indication of movement of a first manipulandum (figure 1, Actuator 1) coupled to a first computer and first feel sensation information indicating a type of force sensation (figure 1, Controller 1) to be output by a network interface (transceiver of the site1) coupled to the computer network and the first computer, the first information sent over said computer network (figure 1, model) to a second manipulandum (figure 1, Actuator 2) coupled to a second computer (figure 1, Controller 2); causing a first force to be applied to said second manipulandum based at least in part on said indication of movement of said first manipulandum (figure 1, remote tug of war system also see figure 6); enabling second information comprising an indication of movement of said second manipulandum and second feel sensation information indicating a type of force sensation to be output by a network interface (transceiver of the site2) coupled to the second computer and the computer network, the second information sent over said computer network to said first manipulandum; and causing a second force to be applied to said first manipulandum based at least in part on said indication of movement of said second manipulandum (figure 1, remote tug of war system also see figure 6).

Claim Rejections - 35 USC § 103

7. Claims 22, 119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (US. 5,299,810).

With regard to claim 22 Pierce et al. does not illustrate a method as recited in claim 21 wherein said first and second graphical objects are paddles. He instead illustrates them being vehicles such as a car however since a boat is also a vehicle and further since boats can have paddles such a feature would be obvious and simply viewed as merely directed toward an obvious intended use of the Pierce et al. gaming system.

With regard to claim 119, Pierce teaches the actuators "are any suitable devices with can convert a signal from the respective computers" (e.g. col. 6 lines 51-52), thus in view of Pierce's teachings to modify the actuators to comprise voice coil actuators as claimed would have been obvious to one of ordinary skill in the art at the time the invention was made without departing from the scope of Pierce's teachings.

8. Claims 23, 28, 29, 42, 43, 58-70, 72-74, 76, 78-82, 108, 114-116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. in view of Yamakita et al.

With regard to claim 58, Pierce et al. was shown above to cover most of the limitations. However Pierce et al. does not illustrate "a server computer over a network" Pierce et al. instead use a local "common ram board" to create a network means for his two computers.

Yamakita et al. illustrates in figure 1 two Sites 1 & 2 remote to each other transmitting and receiving (a network interface) haptic information to and from a satellite above where it is clear that the satellite functions as a server computer between the two computers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. apparatus to use a server computer on a network as taught by Yamakita because the feature of being able to play the game with other players at any location such as Japan and USA would clearly be desirable and therefore motivational to all users.

With regard to claim 23, the combination of Pierce and Yamakita et al. suggest a method as recited in claim 21 wherein said first and second graphical objects are displayed in a web page is viewed as an obvious feature of a network because the window opened up is considered the web page when talking to a remote user.

With regard to claims 42-43 limitations were shown above by the combination of Pierce and Yamakita et al.

With regard to claim 28, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 27 further comprising developing an image on a visual display of said first and second computers, said image portraying a graphical environment at least partially responsive to said movement of said first manipulandum or said second manipulandum (see Pierce et al. figure 1 and figure 2 item 62 and 68).

With regard to claim 29, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 28 wherein said graphical environment includes a first graphical object controlled by said first manipulandum and a second graphical object controlled by said second manipulandum, and wherein when said first and second graphical objects interact in said graphical environment, forces are applied to said first manipulandum and said second manipulandum (see Pierce et al. figure 1 and figure 2 items 62 and 68).

With regard to claims 59-70, the combination of Pierce and Yamakita et al. was shown above to read on all these limitations.

With regard to claims 72, 73, 115, the combination of Pierce and Yamakita et al. suggest a method as recited in claim 75 wherein said first computer is a client computer and said second computer is a server computer because it is obvious that when you are playing the computer instead of another actual user you would refer to one computer as sever and the other client.

With regards to claims 74 and 76, the combination of Pierce and Yamakita et al. was shown above to teach all of these limitations.

With regard to claim 78, the combination of Pierce and Yamakita et al. teaches method as recited in claim 75 wherein said visual display is updated by moving a graphical object within a graphical game environment based on position data received from said haptic feedback device, where a collision between said graphical object and a different graphical object can detected to cause said tactile sensation to be output (see Pierce et al figure 1, item 114).

With regard to claim 79, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 75 wherein said first computer receives an indication of a gaming event in said information, said first computer synchronizing said visual display associated with said gaming event with said tactile sensation that is associated with said gaming event (see Pierce et al. figure 1, item 114 and 110).

With regard to claim 80-81, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 79 wherein said gaming event is a collision, explosion (see Pierce et al. figure 1, item 114 and 110).

With regard to claim 82, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 79 wherein said visual display is updated at a rate substantially faster than said tactile sensation (see Yamakita et al. abstract).

With regards to claim 108, the combination of Pierce and Yamakita et al. was shown above to teach all of these limitations where the first computer and the second computer communicate with at least one server computer over said network.

With regards to claim 114, the combination of Pierce and Yamakita et al. was shown above to teach all of these limitations where a server computer connected to the network.

With regard to claim 116, the combination of Pierce et al. and Yamakita et al. do not illustrate the use of well known standards of practice such as TCP/IP protocols and since the references lacks specific communication details it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement these features because the combination of Pierce et al. must use some communication method and one would be motivated to use conventional methods of communication because there is less risk in using standards that are known to work. The examiner also serves official Notice that TCP/IP existed before applicant's effective filing date.

9. Claims 14-15, 25, 33-34, 105, 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (5,299,810) in view of Ouhyoung et al. ("A low-Cost Force Feedback Joystick and its use in PC Video Games", IEEE Transactions on Consumer Electronics, Vol 41. No. 3, AUGUST 1995 pages 787-794) and Kelley et al. ("MagicMouse:

Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device).

With regard to claim 14, Pierce et al. was shown above in regard to the rejection of claims 12.

Pierce et al. does not illustrate the use of, "a local controller means that communicates with said second computer means",

Ouhyoung et al. teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. device to have the above features as taught by Ouhyoung because Kelley et al on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

With regard to claim 15, the combination Pierce et al. /Ouhyoung et al./Kelley teaches a system as recited in claim 14 wherein said second computer means sends a force feedback command to said local controller means that can be parsed by said local controller means such that said controller means can control said actuator means in response to said force feedback command in a control loop with said sensor means (see Ouhyoung figures 3b and 4).

With regard to claim 25, the combination Pierce et al. /Ouhyoung et al./Kelley a method as recited in claim 17 wherein said second haptic feedback device includes a local controller that communicates with said second computer, wherein said local controller parses a haptic feedback command sent by said second computer such that said local haptic can control said actuator in

response to said haptic feedback command in a control loop with at least one sensor of said second haptic feedback device (see Ouhyoung figures 3b and 4).

With regard to claims 33-34, the combination Pierce et al. /Ouhyoung et al./Kelley was found above to teach all of the limitations of claims 33-34.

With regard to claim 105, the combination Pierce et al. /Ouhyoung et al./Kelley teaches a system as recited in claim 104. in addition Pierce teaches "at least one sensor for sensing positions of said manipulatable object " (It is clear that a steering wheel such as item 62 must have a sensor detecting its position in order for it to work and control the graphical object).

With regard to claim 107, the combination Pierce et al. /Ouhyoung et al./Kelley was found above to teach all of the limitations of claim 107.

10. Claims 92-96, 98-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Pierce et al. and Yamakita et al. as applied to claim 58 above, and further in view of Ouhyoung et al. and Kelley et al.

With regard to method claim 101, the combination of Pierce et al. and Yamakita et al. was shown above in regard to the rejection of claim 58. In addition the combination of Pierce et al. and Yamakita et al. teaches "each of said plurality of client computers in communication with the Internet" (see Yamakita figure 1 where claim term "internet" is broadly read to be any network), enabling said computer-game simulation of said particular client computer to determine if said first graphical object displayed on said client computer has collided with said second graphical object and determine a tactile sensation to generate if said collision has occurred (see Pierce et al. figures 3 and 4).

The combination of Pierce et al. and Yamakita et al. does not illustrate, "wherein said haptic feedback device comprises a user manipulatable object, a movement of said user manipulatable object tracked by a sensor of said haptic feedback device, and wherein said local model receives position data from said haptic feedback device describing said movement and sends haptic feedback data to said haptic feedback device".

Ouhyoung et al. teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. steering wheel to have the above features as taught by Ouhyoung because Kelley et al on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

With regard to claims 94-96, 98-100 the combination of Pierce et al. /Yamakita/Ouhyoung et al./Kelley was shown above to read on all of these limitations.

With regard to claim 92, see e.g. Pierce col. 8 lines 16-35 which discloses determining if a shot was fired, and inherently a button input is present in order to determine this shot.

With regard to claim 93, the combination of Pierce et al. /Yamakita/Ouhyoung et al./Kelley suggest a method as recited in claim 101 wherein said first graphical object is a representation of sporting equipment because Pierce et al. illustrates a car game and since race cars are the equipment used by race car drivers it reads on it.

Response to Arguments

11. Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive.

In response to applicant's argument on pages 19-20 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. specifics of a network) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The memory board is enough to meet the broad claims.

With respect claim 27 (page 21 of the remarks), applicant argues that the Yamakita reference does not reach "enabling first information comprising an indication of movement of a first manipulandum coupled to a first computer and first feel sensation information indicating a type of force sensation to be output by a network interface". This argument is not persuasive Yamakita clearly discloses a technique for tele-virtual reality of dynamic mechanical models, which means that one dynamic mechanical model can be shared by people in distant place (see Figs. 1, 6 and Table 3 List of variable of an equivalent circuit for a remote tug of war system at page 1106).

Applicant's remarks regarding claim 22 are not persuasive since Pierce clearly teaches "receiving a first computer information from a first computer at a network interface of a second computer over a network" as claimed.

In response to applicant's argument on page 22-23 that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining

or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamakita teaches to allow people to play the game with other players at any distant location, e.g. see abstract, page 1103 left hand column third paragraph. Therefore, a suggestion to combine the references was set forth in the rejection.

Applicant's remarks regarding Pierce, Ouhyoung and Kelly are not persuasive because applicant is reading limitations into the claims.

Applicant's remarks regarding Pierce, Yamakita, Ouhyoung and Kelly are not persuasive, see rejection above.

It is believed that the claimed structures are met by the prior art references as applied above.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

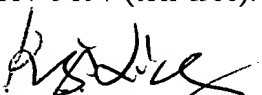
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Regina Liang
Primary Examiner
Art Unit 2674

5/10/07